AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1.   (currently amended): A domain name server ~~(DNS), associated with a database, having~~ for a data network utilizing the IPv6 protocol stack, said domain name server including:

means ~~to receive~~for receiving requests ~~*~~adapted to receive a request containing an IPv6 address of a first network element and a domain name~~;, and the~~

means ~~to return~~for returning to the sender of the said request~~,~~ a response containing one or more addresses associated with a second network element corresponding the said domain name; and~~, characterized in that the said address or addresses are sequenced within the said response by the said domain name server~~

address sequencing means, for sequencing, as a function of said IPv6 address of the first network element, a plurality of IPv6 addresses associated with said second network element, and for putting one or more IPv6 addresses associated with said second network element in the order of the sequence in said response.

2.   (currently amended): The~~A~~ domain name server according to claim 1, wherein~~in which the sequencing is effected at least as a function of the content of the said request~~ said address sequencing means is adapted to effect the sequencing as a function of the topology of the network, so that if the IPv6 address of the first network element is a local address belonging to an addressing space and the plurality of addresses associated with the second network element include at least one global IPv6 address and one local IPv6 address belonging to the same

addressing space, the more local IPv6 address associated with the second network element corresponding to said addressing space is inserted at a first position within said response.

3.   (currently amended): ~~A~~The domain name server according to claim ~~2~~1,~~in which the sequencing is in addition effected as a function of the topology of the network, where the most local address, used to address both the said sender of the request and the network element corresponding to the said domain name, is inserted first~~ said address sequencing means is adapted to effect the sequencing so that if the IPv6 address of the first network element is a "6 to 4" type address beginning with the prefix "2002" and the plurality of addresses associated with the second network element include at least one "6 to 4" type address beginning with the prefix "2002", a "6 to 4" type address beginning with the prefix "2002" is inserted at a first position within said response.

4.   (currently amended): ~~A~~The domain name server according to claim ~~3~~1,~~wherein the address sequencing means is adapted to put the sequenced plurality of IPv6 addresses associated with said second network element in said response ~~in which the sequencing is effected in such a manner that in the case of the presence of an IPv4 cloud (here N₄) between the said sender of the request and the network element corresponding to the said domain name, an address of the "6to4" type is inserted first (here a₆ₜₒ₄)~~.